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We Claim:

## A compound of the formula: 1.

wherein

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one or both of Ra and Rb are selected independently from F, CF<sub>3</sub> and -OR<sup>c</sup> wherein R<sup>c</sup> is hydrogen or (1-4C) alkyl, and any remainder is hydrogen; or Ra and Rb together represent =0 or  $=CH_2;$ 

R<sup>1</sup> represents a naphthyl group or a phenyl, furyl, thienyl or pyridyl group which is unsubstituted or substituted by one or two substituents selected independently from halogen; nitro; cyano; hydroxyimino; (1-10C) alkyl; (2-10C) alkenyl; (2-10C) alkynyl; (3-8C) cycloalkyl; hydroxy (3-8C) cycloalkyl; oxo(3-8C) cycloalkyl; halo(1-10C) alkyl; (CH2)  $vx^1R^9$  in which y is 0 or an integer of from 1 to 4,  $X^1$  represents 0, S,  $NR^{10}$ , CO, COO, OCO,  $CONR^{11}$ ,  $NR^{12}CO$ ,  $NR^{12}COCOO$  or  $OCONR^{13}$ ,  $R^9$ represents hydrogen, (1-10C) alkyl, (3-10C) alkenyl, (3-10C) alkynyl, pyrrolidinyl, tetrahydrofuryl, morpholino or (3-8C)cycloalkyl and  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$  and  $R^{13}$  each independently represents hydrogen or (1-10C)alkyl, or R9 and  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$  or  $R^{13}$  together with the nitrogen atom to 25 which they are attached form an azetidinyl, pyrrolidinyl, piperidinyl or morpholino group; N-(1-4C)alkylpiperazinyl; N-phenyl(1-4C)alkylpiperazinyl; thienyl; furyl; oxazolyl; isoxazolyl; pyrazolyl; imidazolyl; thiazolyl; pyridyl; pyridazinyl; pyrimidinyl; dihydrothienyl; dihydrofuryl; dihydrothiopyranyl; dihydropyranyl; dihydrothiazolyl; (1-4C) alkoxycarbonyldihydrothiazolyl; (1-

4C) alkoxycarbonyldimethyldihydrothiazolyl; tetrahydrothienyl; tetrahydrofuryl; tetrahydrothiopyranyl; tetrahydropyranyl; indolyl; benzofuryl; benzothienyl; benzimidazolyl; and a group of formula  $R^{14}-(L^a)_n-X^2-(L^b)_m$  in which X<sup>2</sup> represents a bond, O, NH, S, SO, SO<sub>2</sub>, CO, CH(OH), CONH, NHCO, NHCONH, NHCOO, COCONH, OCH2CONH or CH=CH, La and Lb each represent (1-4C) alkylene, one of n and m is 0 or 1 and the other is 0, and  $R^{14}$  represents a phenyl or heteroaromatic group which is unsubstituted or substituted by one or two of halogen, nitro, cyano, hydroxyimino, (1-10 10C) alkyl, (2-10C) alkenyl, (2-10C) alkynyl, (3-8C)cycloalkyl, 4-(1,1-dioxotetrahydro-1,2-thiazinyl), halo(1-10C) alkyl, cyano (2-10C) alkenyl, phenyl, and (CH<sub>2</sub>)  $_2$ X $^3$ R $^{15}$  in which z is 0 or an integer of from 1 to 4,  $X^3$  represents 0, s,  $NR^{16}$ , co, CH(OH), coo, oco,  $CONR^{17}$ ,  $NR^{18}CO$ ,  $NHSO_2$ , NHSO2NR<sup>17</sup>, NHCONH, OCONR<sup>19</sup> or NR<sup>19</sup>COO, R<sup>15</sup> represents hydrogen, (1-10C) alkyl, phenyl (1-4C) alkyl, (1-10C) haloalkyl, (1-4C) alkoxycarbonyl (1-4C) alkyl, (1-4C) alkylsulfonylamino (1-4C) alkyl, (N-(1-4C) alkoxycarbonyl) (1-4C) alkylsulfonylamino-(1-4C) alkyl, (3-10C) alkenyl, (3-10C) alkynyl, (3-8C) -20 cycloalkyl, camphoryl or an aromatic or heteroaromatic group which is unsubstituted or substituted by one or two of halogen, (1-4C) alkyl, halo(1-4C) alkyl, di(1-4C) alkylamino and (1-4C) alkoxy and  $R^{16}$ ,  $R^{17}$ ,  $R^{18}$  and  $R^{19}$  each independently represents hydrogen or (1-10C) alkyl, or  $R^{15}$ 25 and  $R^{16}$ ,  $R^{17}$ ,  $R^{18}$  or  $R^{19}$  together with the nitrogen atom to which they are attached form an azetidinyl, pyrrolidinyl, piperidinyl or morpholino group; and

30 R<sup>2</sup> represents (1-6C)alkyl, (3-6C)cycloalkyl, (1-6C)fluoro-alkyl, (1-6C)chloroalkyl, (2-6C)alkenyl, (1-4C)alkoxy(1-4C)alkyl, phenyl which is unsubstituted or substituted by

halogen, (1-4C)alkyl or (1-4C)alkoxy, or a group of formula R<sup>3</sup>R<sup>4</sup>N in which R<sup>3</sup> and R<sup>4</sup> each independently represents (1-4C)alkyl or, together with the nitrogen atom to which they are attached form an azetidinyl, pyrrolidinyl, piperidinyl, morpholino, piperazinyl, hexahydroazepinyl or octahydroazocinyl group; or a pharmaceutically acceptable salt thereof.

- A compound as claimed in Claim 1, wherein R<sup>a</sup> represents
  F, CF<sub>3</sub> or methoxy and R<sup>b</sup> represents hydrogen; or R<sup>a</sup> and R<sup>b</sup> together represent =0 or =CH<sub>2</sub>.
  - 3. A compound as claimed in Claim 2, wherein  $R^a$  represents methoxy and  $R^b$  represents hydrogen.
- 4. A compound as claimed in any one of Claims 1 to 3 wherein R<sup>2</sup> represents (1-6C)alkyl, (1-6C)fluoroalkyl, (2-6C)alkenyl, or a group of formula R<sup>3</sup>R<sup>4</sup>N in which R<sup>3</sup> and R<sup>4</sup> each independently represents (1-4C)alkyl or, together with the nitrogen atom to which they are attached form an azetidinyl, pyrrolidinyl, piperidinyl, morpholino, piperazinyl, hexahydroazepinyl or octahydroazocinyl group.

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- 5. A compound as claimed in Claim 4, wherein R<sup>2</sup> represents methyl, ethyl, propyl, 2-propyl, butyl, 2-methylpropyl, cyclohexyl, trifluoromethyl, 2,2,2-trifluoroethyl, chloromethyl, ethenyl, prop-2-enyl, methoxyethyl, phenyl, 4-fluorophenyl, or dimethylamino.
- 30 6. A compound as claimed in Claim 5, wherein R<sup>2</sup> represents ethyl, 2-propyl or dimethylamino.

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7. A compound as claimed in any one of Claims 1 to 6, wherein R<sup>1</sup> represents 2-naphthyl or a group of formula

$$\mathbb{R}^{20}$$
,  $\mathbb{R}^{20}$ ,  $\mathbb{R}^{20}$  or  $\mathbb{R}^{20}$ 

5 in which

R<sup>20</sup> represents halogen; nitro; cyano; hydroxyimino; (1-10C) alkyl; (2-10C) alkenyl; (2-10C) alkynyl; (3-8C) cycloalkyl; hydroxy(3-8C)cycloalkyl; oxo(3-8C)cycloalkyl; halo(1-10C)alkyl; (CH<sub>2</sub>)<sub>V</sub>X<sup>1</sup>R<sup>9</sup> in which y is 0 or an integer of from 1 to 4,  $X^1$  represents 0, S,  $NR^{10}$ , CO, COO, OCO, CONR<sup>11</sup>, 10 NR<sup>12</sup>CO, NR<sup>12</sup>COCOO or OCONR<sup>13</sup>, R<sup>9</sup> represents hydrogen, (1-10C) alkyl, (3-10C) alkenyl, (3-10C) alkynyl, pyrrolidinyl, tetrahydrofuryl, morpholino or (3-8C)cycloalkyl and R10,  $\mathbb{R}^{11}$ ,  $\mathbb{R}^{12}$  and  $\mathbb{R}^{13}$  each independently represents hydrogen or (1-10C) alkyl, or  $R^9$  and  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$  or  $R^{13}$  together with 15 the nitrogen atom to which they are attached form an azetidinyl, pyrrolidinyl, piperidinyl or morpholino group; N-(1-4C) alkylpiperazinyl; N-phenyl(1-4C) alkylpiperazinyl; thienyl; furyl; oxazolyl; isoxazolyl; pyrazolyl; imidazolyl; 20 thiazolyl; pyridyl; pyridazinyl; pyrimidinyl; dihydrothienyl; dihydrofuryl; dihydrothiopyranyl; dihydropyranyl; dihydrothiazolyl; (1-4C)alkoxycarbonyldihydrothiazolyl; (1-4C) alkoxycarbonyldimethyldihydrothiazolyl; tetrahydrothienyl; tetrahydrofuryl; tetrahydrothiopyranyl; tetrahydropyranyl; indolyl; benzofuryl; benzothienyl; 25

25 tetrahydropyranyl; indolyl; benzofuryl; benzothienyl; benzimidazolyl; and a group of formula  $R^{14}$ -( $L^a$ ) $_n$ - $X^2$ -( $L^b$ ) $_m$  in

which  $X^2$  represents a bond, O, NH, S, SO, SO<sub>2</sub>, CO, CH(OH), CONH, NHCO, NHCONH, NHCOO, COCONH, OCH2CONH or CH=CH, La and  ${\tt L}^{\tt b}$  each represent (1-4C)alkylene, one of n and m is 0 or 1 and the other is 0, and  $R^{14}$  represents a phenyl or heteroaromatic group which is unsubstituted or substituted by one or two of halogen; nitro; cyano; hydroxyimino, (1-10C)alkyl; (2-10C)alkenyl; (2-10C)alkynyl; (3-8C)cycloalkyl; 4-(1,1-dioxotetrahydro-1,2-thiazinyl), halo(1-10C)alkyl; cyano (2-10C) alkenyl, phenyl, (CH<sub>2</sub>)<sub>2</sub>X<sup>3</sup>R<sup>15</sup> in which z is 0 oran integer of from 1 to 4,  $X^3$  represents 0, S,  $NR^{16}$ , CO, 10 CH(OH), COO, OCO, CONR<sup>17</sup>, NR<sup>18</sup>CO, NHSO<sub>2</sub>, NHSO<sub>2</sub>NR<sup>17</sup>, NHCONH, OCONR<sup>19</sup> or NR<sup>19</sup>COO, R<sup>15</sup> represents hydrogen, (1-10C)alkyl, phenyl (1-4C) alkyl, (1-10C) haloalkyl, (1-4C) alkoxycarbonyl (1-4C) alkyl, (1-4C) alkylsulfonylamino (1-4C) alkyl, (N-(1-15 4C) alkoxycarbonyl) (1-4C) alkylsulfonylamino (1-4C) alkyl, (3-10C) alkenyl, (3-10C) alkynyl, (3-8C) cycloalkyl, camphoryl or an aromatic or heteroaromatic group which is unsubstituted or substituted by one or two of halogen, (1-4C)alkyl, halo(1-4C)alkyl, di(1-4C)alkylamino and (1-4C)alkoxy and  $\mathrm{R}^{16},~\mathrm{R}^{17},~\mathrm{R}^{18}$  and  $\mathrm{R}^{19}$  each independently represents hydrogen 20 or (1-10C) alkyl, or  $R^{15}$  and  $R^{16}$ ,  $R^{17}$ ,  $R^{18}$  or  $R^{19}$  together with the nitrogen atom to which they are attached form an azetidinyl, pyrrolidinyl, piperidinyl or morpholino group; and

25 R<sup>21</sup> represents a hydrogen atom, a halogen atom, a (1-4C)alkyl group or a (1-4C)alkoxy group.

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- 8. A compound according to claim 1 wherein  $R^a$  is F and  $R^b$  is hydrogen.
- 9. A compound according to claim 1 wherein  $R^{\text{a}}$  is F and  $R^{\text{b}}$  is F.

- 10. A compound according to claim 9 wherein  $R^2$  is isopropyl.
- 5 11. A compound according to claim 10 wherein  $R^2$  is isopropyl.
  - 12. A compound as claimed in Claim 7, wherein R<sup>1</sup> represents 2-naphthyl, 4-bromophenyl, 4-benzamidophenyl, 4-methyl-
- phenyl, 4-isopropylphenyl, 4-isobutylphenyl, 4-t-butylphenyl, 4-methoxyphenyl, 4-isopropoxyphenyl, 4-cyclopentylphenyl, 4-cyclohexylphenyl, 4-(2-hydroxymethylphenyl)phenyl, 4-(4-hydroxymethylphenyl)phenyl, 4-(2-furyl)phenyl, 4-(3-furyl)phenyl, 4-(2-thienyl)phenyl, 4-(3-
- thienyl)phenyl, 4-(pyrrolidin-1-yl)phenyl, 4-(piperidin-1-yl)phenyl, 3-chloro-4-piperidin-1-ylphenyl, 4-benzyloxy-phenyl, 4-(2-fluorophenyl)phenyl, 4-(3-fluorophenyl)phenyl, 4-(2-formylphenyl)phenyl, 4-(3-formylphenyl)phenyl, 4-(4-formylphenyl)phenyl, 4-(4-methylphenyl)phenyl, 4-(4-
- 20 hydroxphenyl)phenyl, 4-(2-methoxyphenyl)phenyl or 4-(4methoxyphenyl)phenyl.
  - 13. A compound selected from the group consisting of:

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С	H-S
d	F O N-S O , and
е	H F O N S H O

and the pharmaceutically acceptable salts thereof.

- 14. A pharmaceutical composition, which comprises acompound as claimed in Claim 1 and a pharmaceutically acceptable diluent or carrier.
  - 15. A method of potentiating glutamate receptor function in a mammal requiring such treatment, which comprises administering an effective amount of a compound as claimed in Claim 1.
- 16. A method of treating a cognitive disorder; a neuro-degenerative disorder; age-related dementia; age-induced memory impairment; movement disorder; reversal of a drug-induced state; depression; attention deficit disorder; attention deficit hyperactivity disorder; psychosis; cognitive deficits associated with psychosis; or drug-induced psychosis in a patient, which comprises administering to a patient in need thereof an effective amount of a compound as claimed in Claim 1.

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17. A method for improving memory or learning ability in a patient, which comprises administering to a patient in need thereof an effective amount of a compound as claimed in Claim 1.